

EDITED KSA LISTING

CLASS: SYSTEMS SOFTWARE SPECIALIST III (TECHNICAL)

NOTE: Each position within this classification may be required to possess all or some of these knowledge, skills or abilities.

#	Knowledge, Skill, Ability
	Knowledge of:
K1.	Expert knowledge of information technology systems (software) programming, equipment, and capabilities in order to install, maintain, secure, and support the most complex/multi-vendor hardware and software.
K2.	Expert knowledge of the interfaces between hardware and software to determine compatibility of products, installation procedures, troubleshoot, and parameter or configuration changes, and oversee the work of teammates.
K3.	Expert knowledge of the requirements for the installation and implementation of complex information technology software systems to oversee installation of software, application of patches/fixes, resolution of problems, and oversee the work of teammates.
K4.	Expert knowledge of information technology concepts, practices, methods, and principles to oversee, install, maintain, secure, and support hardware and software.
K5.	Expert knowledge of current industry standards and trends to advise users and plan for future changes.
K6.	Advanced knowledge of the regulations, laws, rules, and administrative process of oversight agencies, regulatory agencies, and the State legislature in relation to the State Budgeting Process, Procurement Process, and Project Authority Process in order to prepare and get approval for feasibility studies, Budget Change Proposals, and procurements/contracts.
K7.	Expert knowledge of flowcharts, decision tables, and block diagrams in order to troubleshoot most complex problems and lay out the most complex network relationships and oversee the work of teammates.
K8.	Expert knowledge of Structured Query Language (SQL) programming language to create most complex schemas and database scripts and oversee the work of teammates.
K9.	Expert knowledge of various database access methods to troubleshoot most complex problems, advise users and application developers, and oversee the work of teammates.
K10.	Expert knowledge of data communications access methods to troubleshoot most complex network performance problems, establish connectivity between disparate systems, and oversee the work of teammates.
K11.	Advanced knowledge of computer systems hardware to install, maintain, and support the most complex software and hardware configurations based on application design requirements.
K12.	Advanced knowledge of project management principles which includes defining the scope, preparing the budget/costs, determining resource requirements and schedule, risk and risk mitigation, procurement method, and quality in order to deliver automation products or services on time, in budget, and of high quality.
K13.	Expert knowledge of the design/development of database/data management systems to design and maintain the most complex database applications based on user requirements, and oversee the work of teammates.

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K14.	Expert knowledge of installation procedures to verify successful hardware/software installations; mentor, direct, and oversee the work of teammates; and troubleshoot teammates' work.
K15.	Advanced knowledge of data gathering, sampling, and analysis techniques to troubleshoot the most complex problems, plan for future needs, monitor systems' performance, and present information and make recommendations to managers and users.
K16.	Expert knowledge of agency-specific computer systems such as operating systems, databases, network protocols, network hardware, and security products to install, maintain, and support the department's hardware and software.
K17.	Expert knowledge of system command language statements and utility programs in order to maintain and support the most complex hardware and software systems.
K18.	Expert knowledge of large-scale database architectures, data communication protocols, network hardware, and network configurations to support the most complex technical environments.
K19.	Advanced knowledge of the organization's business enterprise to support business needs and meet business requirements.
K20.	Expert knowledge of the functions and capabilities of utility programs supplied by vendors to make recommendations, mentor staff in their use of the products, maintain systems, and solve problems.
K21.	Expert knowledge of the data communication interfaces, network hardware, and network protocols utilized between the various components of the network in order to solve the most complex problems, complete the most complex designs, troubleshoot and test the most complex designs, and validate the work of teammates.
K22.	Advanced knowledge of the metrics associated with analyzing the performance of the components of the information technology environment to troubleshoot systems performance issues and oversee the work of teammates.

	Skill to:
S1.	Skill to develop detailed installation, maintenance, and support specifications to provide direction to teammates and production support staff.
S2.	Skill to analyze data and situations, and reason logically and creatively in order to troubleshoot, develop capacity plans, make recommendations, prepare reports, and assist developers.
S3.	Skill to identify problems, draw valid conclusions, and develop effective solutions to troubleshoot and assist developers with application and performance issues.
S4.	Skill to establish and maintain cooperative working relationships with those contacted in the course of the work in order to participate on projects, communicate effectively with teammates, users, developers, management, and others.

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S5.	Skill to prepare clear, concise operations, disaster recovery, and Operational Recovery Plans (ORP) documentation to meet departmental and statewide standards.
S6.	Skill to prepare clear, sound, accurate, and informative issue papers and other reports of systems matters to communicate findings, conclusions, and recommendations.
S7.	Skill to justify and secure additional resources (i.e., finances, staff with appropriate skill sets, equipment, space, time) in order to develop and manage complex projects successfully.
S8.	Skill to implement local system software modifications based on new releases from vendors to install updates, patches/fixes, and oversee the work of teammates.
S9.	Skill to perform evaluations of vendor application or operating systems software such as communications or data management packages to determine if they are a viable product to meet business requirements.
S10.	Skill to read and understand technical documents in order to install the most complex hardware and software; troubleshoot problems; communicate effectively with vendors, managers, and users; and oversee teammates' work.
S11.	Skill to plan and schedule hardware, software, and staff resources to complete installation activities and meet assigned deadlines.
S12.	Skill in retrieving, compiling, and reporting data according to established procedures to carry out capacity planning, performance monitoring, and troubleshooting activities.
S13.	Skill to use information technology systems (software) programming, equipment, and its capabilities to install, maintain, secure, and support hardware and software.
S14.	Skill to organize and perform a conversion between generations or versions of computer systems in order to ensure accurate implementation, add functionality, fix existing problems, and meet business requirements.
S15.	Skill to appropriately assign workload in order to provide employees with the time, tools, and training to complete the work, and to control quality.
S16.	Skill to evaluate subordinate teammates to determine skill level and training requirements.
S17.	Skill to train subordinate teammates in order to provide employees with the necessary knowledge and skills to perform their jobs.
S18.	Skill to mentor subordinate teammates in order to provide the necessary knowledge and skills to perform their jobs and prepare them for advancement.
S19.	Skill in formulating, recommending, and implementing standards and procedures to meet project and business needs and ensure consistency.
S20.	Skill to effectively apply knowledge of current trends to evaluate alterative proposals and recommend optimal solutions.
S21.	Skill to apply concepts such as portability and scalability in order to design, implement and evaluate long-term, complex information technology systems.
S22.	Skill to work independently to effectively solve problems, meet deadlines, and keep abreast of current trends.

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S23.	Skill at conducting and facilitating effective meetings to ensure workload is distributed evenly, to foster effective communication, ensure meeting objectives are met, and explain issues and solutions to users, managers, teammates and vendors.
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	Ability to:
A1.	Ability to grasp new concepts in order to keep up with changes in the industry.
A2.	Ability to work independently to complete assigned tasks in a timely manner.
A3.	Ability to work under pressure to meet deadlines and service levels.
A4.	Ability to direct the work of others in order to meet deadlines and service levels.
A5.	Ability to consider the larger business prospective in proposing and designing information technology solutions.

	Special Personal Characteristics:
SPC1	Willing to participate in conferences, meetings, and training sessions to present results/effects of evaluation studies of present/new operating procedures, and provide training to users and/or operations staff on new systems/software.
SPC2	Take the initiative to determine problems, suggest solutions, start activities without needing specific direction, etc.
SPC3	Tact in order to communicate effectively and maintain working relationships.
SPC4	Remain calm and composed in stressful situations and maintain a sense of optimism and a positive mental attitude when under pressure.